

The monitoring forms for compliance with TTHMs and HAA5s are:

- 1** **Quarterly Report to the Primacy Agency for the Running Annual Average (RAA) for Total Trihalomethanes (TTHMs) (1st of 2 pages).**
- 2** **Quarterly Report to the Primacy Agency for the Running Annual Average (RAA) for Haloacetic Acids Five (HAA5) (2nd of 2 pages).**
- 3** **Quarterly Report to the Primacy Agency for the Running Annual Average (RAA) for Source Water Total Organic Carbon (TOC) for Surface Water Systems Serving Greater than 500 Persons to Reduce Monitoring.**
- 4** **TTHM Worksheet.**
- 5** **HAA5 Worksheet.**

**Quarterly Report to the Primacy Agency for the Running Annual Average (RAA)
for Total Trihalomethanes (TTHMs) (1st of 2 pages).**

(The PWS must maintain a RAA of less than 0.080 mg/L for TTHMs and meet the RAA for HAA5s (page 2 of this report). The TTHM and HAA5 samples must be taken at the same time and location.)

Date: _____ System/Treatment Plant _____

PWSID # _____ Filtration Technology _____

Prepared By _____ (Include laboratory results from the last quarter.)

How many water treatment plants (WTP) has the primacy agency determined your system has, including wells drawing from the same aquifer _____ Monitoring requirements (circle one): 4 samples per qtr per WTP, 1

sample per qtr per WTP, 1 sample per year per WTP. Total # of samples required _____ or if seasonal fluctuations in the # of samples per qtr then the # of samples per qtr: 1st qtr _____ 2nd qtr _____ 3rd qtr _____ 4th qtr _____

Has reduced monitoring been granted, if yes, circle which applies: 1 sample per qtr per WTP, 1 sample per year per WTP, 1 sample per every 3-years per WTP.

Check one 1 st Quarter _____ (report by April 10 th) 2 nd Quarter _____ (report by July 10 th) 3 rd Quarter _____ (report by Oct 10 th) 4 th Quarter _____ (report by Jan 10 th)	Total Trihalomethanes Monthly Data (mg/L)*	Total Trihalomethanes Quarterly Average (mg/L)**	Total Trihalomethanes Running Annual Average (mg/L)***
January of 20__			
February of 20__			
March of 20__			
April of 20__			
May of 20__			
June of 20__			
July of 20__			
August of 20__			
September of 20__			
October of 20__			
November of 20__			
December of 20__			

*If more than one sample is taken for a particular month those samples must be averaged, see TTHM worksheet.

**Calculation of Quarterly Average: If the number for Jan. was 1.5 mg/L, Feb. was 1.9 mg/L and March was 1.1 mg/L then, add all three numbers up and divide by 3. For example, $(1.5 + 1.9 + 1.1) = 1.5$ mg/L (this is your quarterly average.)

***Calculation of Running Annual Average: If the number for quarterly average for the 1st quarter was 1.5 mg/L, quarterly average for the 2nd quarter was 1.2 mg/L, quarterly average for the 3rd quarter was 1.1 mg/L and quarterly average for the 4th quarter was 1.8 mg/L then, add all four quarterly average numbers up and divide this time by 4. For example, $(1.5 + 1.2 + 1.1 + 1.8) = 1.4$ mg/L (this is your running annual average.)

**Quarterly Report to the Primacy Agency for the Running Annual Average (RAA)
for Haloacetic Acids Five (HAA5) (2nd of 2 pages).**

(The PWS must maintain a RAA of less than 0.060 mg/L for HAA5s and meet the RAA for TTHMs (page 1 of this report). The TTHM and HAA5 samples must be taken at the same time and location. The PWS must take the same number of HAA5 samples as was established on page one of this report for TTHMs.)

Date: _____ System/Treatment Plant _____

PWSID # _____ Filtration Technology _____

Prepared By _____ (Include laboratory results from the last quarter.)

Check one 1 st Quarter _____ (report by April 10 th) 2 nd Quarter _____ (report by July 10 th) 3 rd Quarter _____ (report by Oct 10 th) 4 th Quarter _____ (report by Jan 10 th)	Haloacetic Acids Five Monthly Data (mg/L)*	Haloacetic Acids Five Quarterly Average (mg/L)**	Haloacetic Acids Five Running Annual Average (mg/L)***
January of 20__			
February of 20__			
March of 20__			
April of 20__			
May of 20__			
June of 20__			
July of 20__			
August of 20__			
September of 20__			
October of 20__			
November of 20__			
December of 20__			

*If more than one sample is taken for a particular month those samples must be averaged, see HAA5 worksheet.

**Calculation of Quarterly Average: If the number for Jan. was 1.5 mg/L, Feb. was 1.9 mg/L and March was 1.1 mg/L then, add all three numbers up and divide by 3. For example, $(1.5 + 1.9 + 1.1) = 1.5$ mg/L (this is your quarterly average.)

3

***Calculation of Running Annual Average: If the number for quarterly average for the 1st quarter was 1.5 mg/L, quarterly average for the 2nd quarter was 1.2 mg/L, quarterly average for the 3rd quarter was 1.1 mg/L and quarterly average for the 4th quarter was 1.8 mg/L then, add all four quarterly average numbers up and divide this time by 4. For example, $(1.5 + 1.2 + 1.1 + 1.8) = 1.4$ mg/L (this is your running annual average.)

TTHM Worksheet

(This worksheet is provided to assist a system in calculating the average of all TTHM samples that were taken during the month when more than one sample is required. The number calculated at the bottom right of this form is the average of all the months samples and is the number that is entered for that month in the second column of the TTHM RAA monitoring form.)

Month _____ Year _____

A # of Samples (1, 2, 3, etc.)	B Chloroform (mg/L)	C Bromoform (mg/L)	D Bromodichlo romethane (mg/L)	E Dibromochlo romethane (mg/L)	F TTHMs (mg/L) (B+C+D+E)
Add all the numbers in column F for TTHMs and enter the sum here>>>					
Calculate the average of all samples for the month by dividing the sum of column F by the total number of samples in column A (F/A). Enter this average into the 2 nd column of the monitoring form for calculating the RAA for TTHMs.					

HAA5 Worksheet

(This worksheet is provided to assist a system in calculating the average of all HAA5 samples that were taken during the month when more than one sample is required. The number calculated at the bottom right of this form is the average of all the months samples and is the number that is entered for that month in the second column of the HAA5 RAA monitoring form.)

Month _____ Year _____

A # of Samples (1, 2, 3, etc.)	B Monochloro acetic acid (mg/L)	C Dichloro acetic acid (mg/L)	D Trichloro acetic acid (mg/L)	E Monobrom oacetic acid (mg/L)	F Dibromo acetic acid (mg/L)	G HAA5 (mg/L) (B+C+D+ E+F)
Add all the numbers in column G for HAA5s and enter the sum here>>						
Calculate the average of all samples for the month by dividing the sum of column G by the total number of samples in column A (G/A). Enter this average into the 2 nd column of the monitoring form for calculating the RAA for HAA5s.						

**Quarterly Report to the Primacy Agency for the Running Annual Average (RAA)
for Source Water Total Organic Carbon (TOC) for Surface Water Systems Serving
Greater than 500 Persons to Reduce Monitoring.**

(The PWS must maintain a RAA of less than 4.0 mg/L for source water TOC in addition to maintaining a RAA of TTHMs/HAA5s of less than 0.040/0.030 mg/L, respectively to be granted reduced monitoring for TTHMs and HAA5s.)

Date: _____ System/Treatment Plant _____

PWSID # _____ Filtration Technology _____

Prepared By _____ (Include laboratory results from the last quarter.)

Check one 1 st Quarter _____ (report by April 10 th) 2 nd Quarter _____ (report by July 10 th) 3 rd Quarter _____ (report by Oct 10 th) 4 th Quarter _____ (report by Jan 10 th)	Total Organic Carbon Source Water Monthly Data (mg/L)*	Total Organic Carbon Source Water Quarterly Average (mg/L)**	Total Organic Carbon Source Water Running Annual Average (mg/L)***
January of 20__			
February of 20__			
March of 20__			
April of 20__			
May of 20__			
June of 20__			
July of 20__			
August of 20__			
September of 20__			
October of 20__			
November of 20__			
December of 20__			

*Sample must be taken prior to any treatment including disinfectant application.

**Calculation of Quarterly Average: If the number for Jan. was 1.5 mg/L, Feb. was 1.9 mg/L and March was 1.1 mg/L then, add all three numbers up and divide by 3. For example, $(1.5 + 1.9 + 1.1) = 1.5$ mg/L (this is your quarterly average.)

***Calculation of Running Annual Average: If the number for quarterly average for the 1st quarter was 1.5 mg/L, quarterly average for the 2nd quarter was 1.2 mg/L, quarterly average for the 3rd quarter was 1.1 mg/L and quarterly average for the 4th quarter was 1.8 mg/L then, add all four quarterly average numbers up and divide this time by 4. For example, $(1.5 + 1.2 + 1.1 + 1.8) = 1.4$ mg/L (this is your running annual average.)

The monitoring forms for compliance with Bromate are:

- 1 Quarterly Report to the Primacy Agency for the Running Annual Average (RAA) for Bromate for Systems Using Ozone.**
- 2 Quarterly Report to the Primacy Agency for the Running Annual Average (RAA) for Source Water Bromide for Systems Using Ozone to Reduce Monitoring for Bromate.**

**Quarterly Report to the Primacy Agency for the Running Annual Average (RAA)
for Bromate for Systems Using Ozone.**

(The PWS must maintain a RAA of less than 0.010 mg/L for bromate. Samples are taken at the entrance of the distribution system. Reduced monitoring is available if the RAA for source water bromide is less than 0.05 mg/L.)

Date: _____ System/Treatment Plant _____

PWSID # _____ Filtration Technology _____

Prepared By _____ (Include laboratory results from the last quarter.)

Has reduced monitoring been granted (yes/no) _____

Check one 1 st Quarter _____ (report by April 10 th) 2 nd Quarter _____ (report by July 10 th) 3 rd Quarter _____ (report by Oct 10 th) 4 th Quarter _____ (report by Jan 10 th)	Bromate Monthly Data (mg/L)*	Bromate Quarterly Average (mg/L)**	Bromate Running Annual Average (mg/L)***
January of 20__			
February of 20__			
March of 20__			
April of 20__			
May of 20__			
June of 20__			
July of 20__			
August of 20__			
September of 20__			
October of 20__			
November of 20__			
December of 20__			

*Sample must be taken at the entrance to the distribution system during normal operating conditions for each ozone plant.

**Calculation of Quarterly Average: If the number for Jan. was 1.5 mg/L, Feb. was 1.9 mg/L and March was 1.1 mg/L then, add all three numbers up and divide by 3. For example, $(1.5 + 1.9 + 1.1) = 1.5$ mg/L (this is your quarterly average.)

***Calculation of Running Annual Average: If the number for quarterly average for the 1st quarter was 1.5 mg/L, quarterly average for the 2nd quarter was 1.2 mg/L, quarterly average for the 3rd quarter was 1.1 mg/L and quarterly average for the 4th quarter was 1.8 mg/L then, add all four quarterly average numbers up and divide this time by 4. For example, $(1.5 + 1.2 + 1.1 + 1.8) = 1.4$ mg/L (this is your running annual average.)

**Quarterly Report to the Primacy Agency for the Running Annual Average (RAA)
for Source Water Bromide for Systems Using Ozone to Reduce Monitoring for Bromate.**

(The PWS must maintain a RAA of less than 0.05 mg/L for source water bromide to reduce the monitoring for bromate to once per quarter.)

Date: _____ System/Treatment Plant _____
 PWSID # _____ Filtration Technology _____
 Prepared By _____ (Include laboratory results from the last quarter.)

Check one 1 st Quarter _____ (report by April 10 th) 2 nd Quarter _____ (report by July 10 th) 3 rd Quarter _____ (report by Oct 10 th) 4 th Quarter _____ (report by Jan 10 th)	Bromide Source Water Monthly Data (mg/L)*	Bromide Source Water Quarterly Average (mg/L)**	Bromide Source Water Running Annual Average (mg/L)***
January of 20__			
February of 20__			
March of 20__			
April of 20__			
May of 20__			
June of 20__			
July of 20__			
August of 20__			
September of 20__			
October of 20__			
November of 20__			
December of 20__			

*Sample must be taken at the source prior to any treatment including disinfectant application.

**Calculation of Quarterly Average: If the number for Jan. was 1.5 mg/L, Feb. was 1.9 mg/L and March was 1.1 mg/L then, add all three numbers up and divide by 3. For example, $(1.5 + 1.9 + 1.1) = 1.5$ mg/L (this is your quarterly average.)

***Calculation of Running Annual Average: If the number for quarterly average for the 1st quarter was 1.5 mg/L, quarterly average for the 2nd quarter was 1.2 mg/L, quarterly average for the 3rd quarter was 1.1 mg/L and quarterly average for the 4th quarter was 1.8 mg/L then, add all four quarterly average numbers up and divide this time by 4. For example, $(1.5 + 1.2 + 1.1 + 1.8) = 1.4$ mg/L (this is your running annual average.)

The monitoring forms for compliance with the maximum residual disinfectant levels for chlorine and chloramines are:

- 1 Quarterly Report to the Primacy Agency for the Running Annual Average (RAA) for Chlorine and Chloramines.**
- 2 Chlorine/Chloramine Residual Worksheet.**

**Quarterly Report to the Primacy Agency for the Running Annual Average (RAA)
for Chlorine and Chloramines.**

(The PWS must maintain a RAA of less than 4.0 mg/L for chlorine and chloramines. Samples are taken at the same time and location as total coliform samples are taken. Monitoring cannot be reduced.)

Date: _____ System/Treatment Plant _____

PWSID # _____ Filtration Technology _____

Prepared By _____ (Include laboratory results from the last quarter.)

Check one 1 st Quarter _____ (report by April 10 th) 2 nd Quarter _____ (report by July 10 th) 3 rd Quarter _____ (report by Oct 10 th) 4 th Quarter _____ (report by Jan 10 th)	Chlorine or Chloramine Monthly Data (mg/L)*	Chlorine or Chloramine Quarterly Average (mg/L)**	Chlorine or Chloramine Running Annual Average (mg/L)***
January of 20__			
February of 20__			
March of 20__			
April of 20__			
May of 20__			
June of 20__			
July of 20__			
August of 20__			
September of 20__			
October of 20__			
November of 20__			
December of 20__			

*This sample is the average of all samples taken during the month (routine, repeat, increased routine sampling the following month for systems taking less than 5 total coliform samples per month and other sampling for compliance for total coliforms.) See chlorine/chloramine worksheet.

**Calculation of Quarterly Average: If the number for Jan. was 1.5 mg/L, Feb. was 1.9 mg/L and March was 1.1 mg/L then, add all three numbers up and divide by 3. For example, $(1.5 + 1.9 + 1.1) = 1.5$ mg/L (this is your quarterly average.)

***Calculation of Running Annual Average: If the number for quarterly average for the 1st quarter was 1.5 mg/L, quarterly average for the 2nd quarter was 1.2 mg/L, quarterly average for the 3rd quarter was 1.1 mg/L and quarterly average for the 4th quarter was 1.8 mg/L then, add all four quarterly average numbers up and divide this time by 4. For example, $(1.5 + 1.2 + 1.1 + 1.8) = 1.4$ mg/L (this is your running annual average.)

Chlorine/Chloramine Residual Worksheet

(This worksheet is provided to assist a system in calculating the average of all chlorine or chloramine residual levels recorded during total coliform sampling during the month. Each row will contain only one residual level and will be located under one of the following headings: routine, repeat, increased routine or other compliance total coliform sample. The number from this row will be carried over to column F and summed on the second to last row of the table. The number calculated at the bottom right of this table is the average of all the months residual levels and is the number that is entered for that month in the second column of the chlorine/chloramine RAA monitoring form.)

Month _____ Year _____

A # of Samples (1, 2, 3, etc.)	B Chlorine/ Chloramine Level Recorded for Routine Total Coliform Sample (mg/L)	C Chlorine/ Chloramine Level Recorded for Repeat Total Coliform Sample (mg/L)	D Chlorine/ Chloramine Level Recorded for Increased Routine Total Coliform Sample (mg/L)	E Chlorine/ Chloramine Level Recorded for Other Compliance Total Coliform Sample (mg/L)	F Carry the Chlorine/ Chloramine Level in B, or C, or D, or E to this column (mg/L) <small>(there should be only one sample per row)</small>
Add all the numbers in column F and enter the sum here>>					
Calculate the average of all residual levels for the month by dividing the sum of column F by the total number of samples in column A (F/A). Enter this average into the 2 nd column of the monitoring form for calculating the RAA for chlorine/chloramines.					

The monitoring forms for compliance with chlorine dioxide and chlorite are:

- 1 Quarterly Report to the Primacy Agency for Daily, Monthly, and Additional Chlorite Sampling for Systems using Chlorine Dioxide.**
- 2 Quarterly Report to the Primacy Agency for Daily Chlorine Dioxide Sampling (no chlorine booster station) for Systems using Chlorine Dioxide.**
- 3 Quarterly Report to the Primacy Agency for Daily Chlorine Dioxide Sampling (with a chlorine booster station) for Systems using Chlorine Dioxide.**

Quarterly Report to the Primacy Agency for Daily, Monthly, and Additional Chlorite Sampling for Systems using Chlorine Dioxide.

(The PWS must monitor for chlorite daily at the entrance of the dist. system and one monthly 3-sample set in the dist system at the first customer, average and maximum residence time. A PWS exceeding the daily chlorite level of 1.0 mg/L must take an additional 3-sample set in the dist. system at the first customer, average and maximum residence time the following day. If the average of any 3-sample set exceeds 1.0 mg/L the system has a nonacute violation.) Reduced monitoring has been granted for monthly monitoring (yes/no)_____

Date:_____ System/Treatment Plant_____

PWSID # _____ Filtration Technology_____

Prepared By _____ (Include laboratory results from the last quarter.)

Year _____ Month _____	Chlorite Daily Data (mg/L)	Routine Monthly or Additional Dist. Sample	Distribution Chlorite at First Customer (mg/L)	Distribution Chlorite at Average Time (mg/L)	Distribution Chlorite at Max. Time (mg/L)	Average of Three Dist. Samples (mg/L)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Quarterly Report to the Primacy Agency for Daily Chlorine Dioxide Sampling (no chlorine booster station) for Systems using Chlorine Dioxide.

(The PWS must monitor for chlorine dioxide daily at the entrance of the dist. system. Two consecutive daily samples exceeding 0.8 mg/L or failure to monitor a daily sample after exceeding 0.8 mg/L in a daily sample is a nonacute violation. A PWS exceeding the daily chlorine dioxide level of 0.8 mg/L must take a 3-sample set in the dist. system the following day at the first customer at six hour intervals. If any one of the three samples taken in the dist. system exceed 0.8 mg/L, it is an acute violation.)

Date: _____ System/Treatment Plant _____

PWSID # _____ Filtration Technology _____

Prepared By _____ (Include laboratory results from the last quarter.)

Year _____ Month _____	ClO ₂ Daily Data (mg/L)	ClO ₂ Dist. First Customer at 0 Hours (mg/L)	ClO ₂ Dist. First Customer at 6 Hours (mg/L)	ClO ₂ Dist. First Customer at 12 Hours (mg/L)	ClO ₂ Dist. Highest Level (mg/L)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Quarterly Report to the Primacy Agency for Daily Chlorine Dioxide Sampling (with a chlorine booster station) for Systems using Chlorine Dioxide.

(The PWS must monitor for chlorine dioxide daily at the entrance of the dist. system. Two consecutive daily samples exceeding 0.8 mg/L or failure to monitor a daily sample after exceeding 0.8 mg/L in a daily sample is a nonacute violation. A PWS exceeding the daily chlorine dioxide level of 0.8 mg/L must take a 3-sample set in the dist. system the following day at the first customer, average and maximum residence time. If any one of the three samples taken in the dist. system exceed 0.8 mg/L, it is an acute violation.)

Date: _____ System/Treatment Plant _____

PWSID # _____ Filtration Technology _____

Prepared By _____ (Include laboratory results from the last quarter.)

Year _____ Month _____	ClO ₂ Daily Data (mg/L)	ClO ₂ Dist. First Customer (mg/L)	ClO ₂ Dist. Average Residence time (mg/L)	ClO ₂ Dist. Maximum Residence Time (mg/L)	ClO ₂ Dist. Highest Level (mg/L)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					